1.0 INTRODUCTION

1.1 PROPOSED ACTION

The Umatilla Generating Company L.P., a Delaware limited partnership, proposes to construct a natural gas-fired combined cycle electric power generation plant near Hermiston, Oregon. The plant would have a nominal generation capacity of 550 megawatts (MW). Electric power from the proposed plant would enter the regional grid at the Bonneville Power Administration's McNary Substation.

The Umatilla Generating Project is only feasible if the Bonneville Power Administration (BPA) agrees to provide the necessary connection to the regional grid. Before agreeing, Bonneville Power Administration must fulfill its responsibilities under the National Environmental Policy Act (NEPA) by assessing the potential environmental consequences of providing the connection.

1.2 PURPOSE AND NEED FOR THE ACTION

1.2.1 Underlying Need for Action

Recent national and regional forecasts project increasing consumption of electrical energy to continue into the foreseeable future, requiring development of new generation resources to satisfy the increasing demand.

According to the United States Energy Information Administration,

> With the number of U.S. households projected to rise by 1.0 percent per year between 1999 and 2020, residential demand for electricity is expected to grow by 1.9 percent annually (Figure 1-1). Residential electricity demand changes as a function of the time of day, week, or year. During summer, residential demand peaks in the late afternoon and evening, when household cooling and lighting needs are highest. This periodicity increases the peak-to-average load ratio for local utilities, which rely on quick-starting gas turbines or internal combustion engines to satisfy peak demand. Although many regions currently have surplus baseload capacity, strong growth in the residential sector is expected to result in a need for more "peaking" capacity. Between 1999 and 2020, generating capacity from gas turbines and internal combustion engines is projected to increase from 75 gigawatts to 211 gigawatts.[1]

[1] Energy Information Administration, Annual Energy Review 1999, DOE/EIA-0383(2001). Washington, D.C., July 2000.

The Western Systems Coordinating Council[2] (WSCC) similarly forecasts peak demand in the western part of the continental United States, Canada, and Mexico to increase at a compound rate of 2.1 percent per year from 1999 through 2009.[3] WSCC forecasts the same rate of increase for the Northwest Power Pool (the states of Washington, Oregon, Idaho and Utah; the Canadian provinces of British Columbia and Alberta; and portions of Montana, Wyoming, Nevada, and California).

Also, the Northwest Power Planning Council (NWPPC) recently conducted an analysis of the Pacific Northwest's electrical power supply. The NWPPC study concluded,

> Over each of the next few winters (the months of December, January, and February), with no new resources added to the system beyond those already under construction, there is a relatively high probability of one or more "generation insufficiency events" in which generation supply is not adequate to meet loads. … The probability of a generation shortfall reaches approximately 24 percent by 2003.
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> The (NWPPC) believes that a 24-percent probability of supply inadequacy is unacceptably large. There are a number of different reliability measures used in the electricity industry, but the 24 percent falls into a category called Loss of Load Probability (LOLP), which is the probability of some generation shortfall over a specified period of time. The traditional utility standard for generation LOLP in the (United States) is 5 percent, or one event in 20 years. The results of this study show a likelihood of interruption almost five times higher than this traditional standard. In order to meet that standard, we estimate that it would require almost 3,000 megawatts of new generating resources by 2003.[4]

All three reports recognize the need to develop multiple new types of resources to satisfy increasing demand. The NWPPC study concludes, "(S)ignificant amounts of new resources are required to bring the loss of load probability down to a level consistent with our interpretation of industry standards. We now have a competitive generation market in which

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[2] The WSCC, organized in August 1967, provides coordination essential in operating and planning a reliable and adequate electric power system for the western part of the continental United States, Canada, and Mexico. The WSCC region encompasses approximately 1.8 million square miles, representing a service area equivalent to more than one-half of the contiguous area of the United States. WSCC is the largest, geographically, of the ten regional councils of the North American Electric Reliability Council.

[3] WSCC. October 2000. *10-Year Coordinated Plan Summary, 2000-2009: Planning and Operation for Electric System Reliability.* Salt Lake City, UT.

[4] Northwest Power Planning Council. March 6, 2000. *Northwest Power Supply Adequacy/Reliability Study Phase 1 Report*. Portland, OR.

new generation development is typically undertaken by independent (non-regulated) developers. We would expect some part of the needed new resources to be supplied by new generation developed in response to market forces."

Generation resources typically require interconnection with a high-voltage electrical transmission system for delivery to purchasing retail utilities. Bonneville Power Administration (BPA) owns and operates the Federal Columbia River Transmission System (FCRTS), comprising more than three-fourths of the high-voltage transmission grid in the Pacific Northwest and including extra-regional transmission facilities. BPA operates the FCRTS, in part, to integrate and transmit "electric power from existing or additional Federal or non-Federal generating units."[5] Interconnection with the FCRTS is essential to deliver power from many generation facilities to loads both within and outside the Pacific Northwest.

In summary, electrical consumers in the Pacific Northwest and Western states need increased power production to serve increasing demand, and high-voltage transmission services to deliver that power.

Because the Umatilla Generating Company L.P. has requested to integrate power from its proposed Umatilla Generating Project into the FCRTS at McNary Substation in Umatilla County, Oregon, BPA must decide whether and how to grant that request.

1.2.2 Purposes

BPA intends to base its decision on the following objectives:

- An adequate, economical, efficient and reliable power supply to the Pacific Northwest, including FCRTS electrical stability and reliability;
- Consistency with BPA environmental and social responsibilities; and
- Cost and administrative efficiency.

1.3 NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

The National Environmental Policy Act (NEPA), signed into law in 1970, requires that the environmental consequences of any proposed action by a federal agency be determined before a final decision on the action is taken. Where the action could have a significant adverse impact on the environment, an environmental impact statement (EIS) must be prepared. Because the proposed power plant and its connection to the regional grid could potentially have a significant adverse impact on the environment, this EIS has been prepared.

[5] 16 U.S.C. 838b.

1.3.1 Public Involvement

NEPA requires that the public be provided an opportunity to participate in the EIS process, both before environmental analysis begins and after a draft EIS is completed. Public comments on the scope of an EIS are solicited before EIS preparation begins. This early solicitation of public comments is referred to as the scoping process.

As required by NEPA, BPA published a Notice of Intent (NOI) to prepare an EIS on the Umatilla Generating Project in the Federal Register dated January 5, 2001. The NOI announced the commencement of a 45-day scoping period during which comments from the public would be accepted. It also invited members of the public to a scoping meeting held at Hermiston High School on January 30, 2001. The meeting was in the form of an open house. After signing in, members of the public were invited to examine exhibits describing the proposed project and to discuss it with representatives of BPA and the Umatilla Generating Company, L.P. Comments and suggestions for topics to be addressed in the EIS were recorded.

To inform the general public of the scoping meeting, paid public announcements were placed in local papers (the Hermiston Herald, the Tri-City Herald and the East Oregonian) in editions published about one week before the meeting. Letters were sent to all land-owners with property within several hundred feet of the proposed facilities. Also, letters were sent to local, state and federal agencies and Native American organizations that might have an interest in the proposed project.

After the meeting and at the conclusion of the comment period, BPA prepared a report documenting results of scoping. The scoping report was mailed to the all parties on the NOI mailing list and attendees at the public meeting.

1.3.2 Comments Received

Approximately 30 people attended the scoping meeting, including representatives of BPA and the project proponent. Nine comments were recorded at the meeting. Several parties expressed the same concerns. BPA received one letter (U.S. Environmental Protection Agency), two e-mails and one telephone comment. Topics raised in the comments included alternatives to the proposed project, visual impacts, air quality, climate change, cumulative impacts, the need for quantification of impacts, where possible, impacts on health and safety, water consumption and the use of union labor. The comments are listed in the scoping report, which is contained in Appendix B.

All comments received are addressed in this EIS, with the exception of comments regarding the use of unionized labor at construction sites. That issue is beyond the scope of this EIS.

1.4 STATE OF OREGON ENVIRONMENTAL REVIEW

Oregon does not have a state law equivalent to NEPA. Instead, environmental review is conducted through the state's energy facility siting procedures. Before construction of an energy facility is approved in Oregon, the Energy Facility Siting Council (EFSC) must find that the proposed facility meets certain standards, including environmental standards, pursuant to Oregon Administrative Rule Chapter 345, Division 21, Section 045. If satisfied that a proposed project meets the standards, EFSC issues a Site Certificate that permits the project to be built.

In 1995, the Umatilla Generating Company proposed to build a 481-MW power plant at the same site as the currently proposed 550-MW plant. An application for a site certificate was submitted to EFSC in July 1995, but before a certificate could be issued the Umatilla Generating Company, L.P. requested that its processing be delayed. After modifying the proposed project somewhat, the Umatilla Generating Company submitted an amended application for a site certificate in February 2001. Review of the amended application by state agencies will proceed concurrent with the NEPA review process.

1.5 SCOPE AND ORGANIZATION OF THE EIS

Chapter 2 of this EIS describes the proposed action and its alternatives. The action is defined comprehensively to include both the federal action(connection of the proposed power plant to the regional electric power transmission grid) and construction of the power plant and its related and supporting facilities. The related and supporting facilities include a natural gas pipeline, raw and reclaimed water pipelines, and electrical power transmission lines. Chapter 3 describes the environmental consequences of the proposed action. An assessment of the effects of the proposed action on geology, soils and seismicity, hydrology and water quality, vegetation and wildlife, fish, air quality, noise, traffic, visual quality and aesthetics, cultural resources, land use, socioeconomics, public services and health and safety are included in Chapter 3. Cumulative and unavoidable impacts are also addressed in Chapter 3. Cumulative impacts are the impacts of the proposed action viewed collectively with the impacts of other past, contemporary, or reasonably predictable future actions. Unavoidable impacts are those impacts that are unavoidable and remain significant even with the application of mitigation measures. Chapter 4 describes how the proposed action would comply with various legal and regulatory requirements. Contributors to the EIS are listed in Chapter 5. Recipients of the EIS are listed in Chapter 6. References, a glossary and an index are provided in Chapters 7, 8 and 9, respectively.